

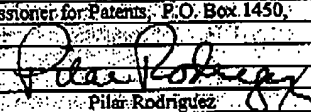
Patent

Attorney Docket No.: Intel 2207/7562
Assignee: Intel Corporation**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**RECEIVED
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DEC 26 2006

APPLICANTS : John I. GARNEY et al.
SERIAL NO. : 09/461,625
FILED : December 14, 1999
FOR : TRACKING TRANSACTION STATUS
FOR A BUS SYSTEM PROVIDING LEGACY
BUS COMPATIBILITY
GROUP ART UNIT : 2616
EXAMINER : Frank DUONG

M/S: APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING	
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Dated: December 26, 2006	 Pilar Rodriguez

ATTENTION: Board of Patent Appeals and Interferences

APPEAL BRIEF

Dear Sir:

This brief is in furtherance of the Notice of Appeal, filed in this case on October 24, 2006.

12/29/2006 EFLDRES 00000016 110600 09461625

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1. REAL PARTY IN INTEREST

The real party in interest in this matter is Intel Corporation. (Recorded December 14, 1999; Reel/Frame 010481/0611).

2. RELATED APPEALS AND INTERFERENCES

An Appeal Brief was filed in this case on November 21, 2005.

3. STATUS OF THE CLAIMS

Claims 2-21, 23-31, and 33-44 are pending in the application. Claims 2-4, 33-35, 42 and 44 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,064,554 to Kim. Claims 23-25 and 43 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of U.S. Patent No. 6,289,466 to Bayramoglu et al., hereinafter ("Bayramoglu"). Claims 5-21 and 36-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of U.S. Patent No. 5,832,492 to Wooten. Claims 26-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of Bayramoglu, further in view of Wooten. Claims 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney et al., hereinafter ("Garney"). Additionally, claim 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney. Also, independent claims 43 and 44 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney and unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney. Finally,

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dependent claims 2-10, 23-31 and 33-41 (each of which depend upon one of the independent claims 42-44) are rejected for their dependence upon one of the rejected claims 42-44.

4. STATUS OF AMENDMENTS

The claims listed on page A-1 of the Appendix attached to this Appeal Brief reflect the present status of the claims.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

The embodiment of claim 11 generally describes a method for communicating data between a host and an agent, the method comprising: receiving at a host controller (e.g., *see* page 8, line 24 – Figure 1a, 110) from an agent a request to perform transactions periodically with a first period (e.g., *see* page 8, line 25-page 9, line 6); generating a frame template (e.g., *see* page 18, line 20-22) including a first transaction to be performed between the host controller and a hub (e.g., *see* page 17, line 8-14, *also see* Figure 1, 120); and performing periodically the first transaction of the frame template with a second period that is less than or equal to half of the first period (e.g., *see* page 17, line 14-18).

The embodiment of claim 16 generally describes a method for communicating data between a host and an agent, the method comprising: receiving at a host controller (e.g., *see* page 8, line 24 – Figure 1a, 110) from an agent a request to perform transactions periodically with a first period (e.g., *see* page 8, line 25-page 9, line 6); generating a first frame template and a second frame template (e.g., *see* page 18, line 20-22) each including a first transaction to be performed between the host controller and a hub (e.g., *see* page 17, line 9-14, *also see* Figure 1, 120); performing periodically with the first period the first transaction from the first frame

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template (e.g., *see* page 18, lines 4-9); and performing periodically with the first period the first transaction from the second frame template such that the first transaction from the first template and the first transaction from the second frame template (e.g., *see* page 20, lines 11-12) are displaced in time by an interval (e.g., *see* page 17, line 14-16).

The embodiment of claim 42 generally describes a method for communicating data between a host and an agent, the method comprising: performing a first transaction at a first time between a host controller and a hub (e.g., *see* page 17, line 6-9, *also see* Figure 1, 120), said first transaction initiated by said host controller; performing a second transaction between the hub and an agent based on the first transaction at the first time (e.g., *see* page 17, line 9-14); and repeating, by the host controller, the first transaction at a second time between the host controller and the hub (e.g., *see* page 17, line 14-18).

The embodiment of claim 43 generally describes a digital system comprising: a host controller; a device driver adapted to operate the host controller to initiate and perform a first transaction at a first time between the host controller and a hub (e.g., *see* page 17, line 6-9, *also see* Figure 1, 120) and to initiate and repeat the first transaction at a second time between the host controller and the hub (e.g., *see* page 17, line 14-18); wherein the hub is adapted to perform a second transaction with an agent based upon the first transaction at the first time (e.g., *see* page 17, line 9-14); and wherein the first transaction at the second time is repeated after the second transaction (e.g., *see* page 17, line 9-14).

The embodiment of claim 44 generally describes a digital system comprising: a first hub controller (e.g., *see* page 28, line 5, Figure 9, 118) adapted to initiate and perform a first transaction at a first time with a host controller (e.g., *see* page 17, line 6-9) and to initiate and perform the first transaction at a second time with the host controller (e.g., *see* page 17, line 14-

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18); a second hub controller coupled to the first hub controller and adapted to perform a second transaction with an agent based upon the first transaction at the first time (e.g., *see* page 17, line 9-14); and wherein the first transaction at the second time is performed after the second transaction (e.g., *see* page 17, line 14-16).

Figure 1a illustrates a block diagram of a bus using a protocol in accordance with the present invention. **Figure 1b** illustrates a process 150 showing a method in accordance with this invention for communicating with a peripheral having a lower data rate, than the data rate of a host controller. **Figure 1c** illustrates in greater detail process 152 showing an advanced transaction for a interrupt out transfer in accordance with an embodiment of this invention. **Figure 1d** illustrates in greater detail repeat advanced transaction 156 for an interrupt out transfer in accordance with an embodiment of this invention. **Figures 3a and 3b** illustrate state machine diagrams for a host controller and a hub, respectively, performing another transfer in accordance with this invention, specifically an inbound bulk, control, or interrupt transfer. **Figures 4a and 4b** illustrate state machine diagrams for a host controller and a hub, respectively, performing another transfer in accordance with this invention, specifically an outbound isochronous transfer. **Figures 5a and 5b** illustrate state machine diagrams for a host controller and a hub, respectively, performing another transfer in accordance with this invention, specifically an inbound isochronous transfer. Process 500 and process 560 show the state machine for a host controller and a hub, respectively. Process 500 includes a token phase (IN) which is not repeated. In response to IN, process 560 will return data to the host controller. **Figure 6** illustrates a diagram 600 showing transactions on a bus in accordance with an embodiment of the present invention. Diagram 600 illustrates a brief sample of activity on bus 100 due to a legacy endpoint which requires a data transfer every four frames. **Figure 7**

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illustrates a diagram 700 showing transactions on a bus in an embodiment of the present invention. Diagram 700 illustrates a brief sample of activity on bus 100 due to a legacy endpoint which requires a data transfer every four frames. Tracking of repeat transactions in the hub will be described by referring to Figure 8 which illustrates in greater detail hub 120 in an embodiment in accordance with the present invention. Synchronization of hub 120 will be described by referring to Figure 9 which illustrates a memory including data structures used for repeat transaction tracking and processing for an embodiment in accordance with the present invention. Tracking of repeat transactions will now be described by referring to Figure 10a that illustrates a flowchart of a process 200 for initializing state indicators in a hub in an embodiment in accordance with the present invention. Figure 10b which illustrates a process 210 for tracking transactions for an embodiment in accordance with the present invention. After controller 181 performs classic transactions with peripheral 130, controller 181 updates the following state indicators: handshake_N and completeN. Figure 10c illustrates a process 230 for updating state indicators for an embodiment in accordance with the present invention.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney et al., hereinafter ("Garney"). Claim 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney. Also, independent claims 43 and 44 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney and unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney.

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B. Claims 2-4, 33-35, 42 and 44 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,064,554 to Kim.

C. Claims 5-21 and 36-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of U.S. Patent No. 5,832,492 to Wooten.

D. Claims 23-25 and 43 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of U.S. Patent No. 6,289,466 to Bayramoglu et al., hereinafter ("Bayramoglu").

E. Claims 26-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim in view of Bayramoglu, further in view of Wooten.

F. Claims 2-10, 23-31 and 33-41 (each of which depend upon one of the independent claims 42-44) are rejected for their dependence upon one of the rejected claims 42-44.

7. ARGUMENT

A. Double patenting rejections with regard to U.S. Patent Nos. 6,792,495 and 6,813,251 to Garney.

With regard to the nonstatutory obviousness-type double patenting rejections described under Section 6.A of this Appeal Brief, Applicant have filed Terminal Disclaimers obviating the current rejections. Therefore, the current rejections are moot.

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B. Claims 2-4, 33-35, 42 and 44 are not anticipated under 35 U.S.C. §102(e) by U.S. Patent No.6,064,554 to Kim.

With regard to the §102(e) rejection based on Kim, Applicants respectfully submit that nowhere does the Kim reference teach, suggest or disclose at least "[a] method for communicating data between a host and an agent, the method comprising: ...*repeating, by the host controller, the first transaction at a second time between the host controller and the hub*" (e.g., as described in claim 42).

The Examiner asserts Kim teaches repeating, by the host controller 11, the first transaction at a second time (citing column 6, lines 32-39) between the host controller and the hub 20. See Office Action dated 2/2/2006, paragraph 2. Applicants disagree.

Column 6, lines 32-39 of Kim state:

As described above, according to the present invention, only one input terminal and one output terminal of the USB hub controller are used regardless of the number of the power output ports of a USB hub unit to prevent overcurrent from flowing to the subsequent USB hub units and/or peripheral devices. Therefore, the circuit design is simplified regardless of the number of the power output ports.

The cited section of Kim is directed toward the prevention of overcurrent, i.e., current in excess of the rated current or ampacity of a conductor. It is specifically directed toward preventing overcurrent in the USB hub units and other peripheral devices. The cited section describes simplifying the design of the circuit regardless of the number of power output ports to prevent this. It does not describe repeating, by a host controller, a first transaction at a second time between the host controller and a hub.

The Examiner's associated remarks are inapplicable and unsupported by the reference. The Examiner states that the reference describes using only one input and output terminal at a single time, thus requiring other terminals to the other devices to be used at a second/different

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time. Applicants disagree. As discussed above, the cited section is directed to overcurrent protection in a circuit, achieved by using one input terminal and one output terminal *only of the USB hub controller*. Clearly, this doesn't categorically necessitate using different terminals upon a second transaction. It merely requires using one input terminal and one output terminal *at a time*. Therefore, the Examiner's extraneous assertions are unsupported by the reference.

However, even if the Examiner's extraneous assertions were to be assumed to be true (they are not), the cited section still does not describe the relevant limitations. Requiring other terminals on the other devices to be used at a second/different time (as asserted by the Examiner) is not the same as repeating, by a host controller, a first transaction at a second time between the same host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application, at all. In order to support a proper §102(e) rejection, the cited reference must teach, suggest, or describe at least these limitations. It does not.

The Examiner further alleges Kim teaches performing a first transaction (citing column 3, lines 23-42), a plurality of devices having communications (citing Figure 1), communicating between the host controller and other of the plurality of devices 40 (citing column 2, line 64 – column 3, line 22), and teaches only one input and output terminal is used at a single time (citing column 6, line 32-39). *See* Office Action dated 7/24/2006, paragraph 3. Applicants disagree and submit the Kim reference does not describe the alleged limitations. However, for the purposes of this argument Applicants will assume only arguendo the allegations are true.

To this end, the Examiner further argues in order to communicate between the host controller and each of the other plurality of device 40, such communication would involve the same transaction at a different time. *See* Office Action dated 7/24/2006, paragraph 3.

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Applicants respectfully submit this assertion is erroneous, unsupported by the Kim reference (the Examiner offers no citation at all), and insufficient to support a proper rejection for the following reasons.

As stated above, even if the Examiner were assumed to be true (they are not), the asserted abilities do not mean a certain transaction is repeated at a different time. Specifically, even if one were to assume Kim teaches an embodiment performing one transaction, communicating between a host controller and a plurality of devices, and that one input and output terminal at a time, these assertions have no relation to whether Kim teaches *repeating, by the host controller, the first transaction at a second time between the host controller and the hub*" (e.g., as described in claim 42). In addition, the Examiner does not cite to any section in the Kim reference where such an inapposite conclusion can be drawn. Applicants submit the Kim reference does not teach, suggest or describe the relevant limitations anywhere. In order to support a proper rejection, the Examiner must show where the Kim reference specifically teaches the relevant limitations. Since it does not, the rejection should be withdrawn.

With regard to the Examiner's assertion that Applicants argue the transaction, occurring at a different time is not between the same host controller and the same hub, Applicants respectfully submit the Examiner misunderstands the Applicants' argument. Applicants therefore clarify and maintain that requiring other terminals on the other devices to be used at a second/different time (as asserted by the Examiner) is not the same as *repeating, by a host controller, a first transaction at a second time between the same host controller and the same hub that participated in the first transaction the first time*, as described in embodiments of the present application, at all. Therefore, the Examiner's assertions regarding Figure 1 are moot, and the Kim fails to teach repeating a first transaction for at least the reasons described above.

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Wooten fails to teach or suggest the limitation lacking in Kim as well. Wooten is directed towards managing scheduled transfers, specifically a method of linking lists of scheduled transfers. In Wooten, the host controller is primarily directed to set up lists of transactions for the host controller to operate on during serial bus frame intervals. There is, however, no description of repeating, by a host controller, a first transaction at a second time between the *same* host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application.

Bayramoglu fails to teach or suggest the limitation lacking in Kim as well. Bayramoglu is directed towards a method of implementing bezel buttons to control a peripheral in a computer system. It does not describe repeating, by a host controller, a first transaction at a second time between the *same* host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application.

Applicants respectfully submit that each and every element is not taught, suggested or described by the cited references, and therefore the §102(e) rejection of claim 42 is lacking and should be withdrawn. Independent claims 11, 16, 43 and 44 include substantively similar limitations and therefore should be allowed for the same reasons. Claims 2-10, 12-15, 17-21, 23-31 and 33-41 depend from allowable independent claims, and therefore should be allowed as well.

C. Claims 5-21 and 36-41 are not rendered obvious under 35 U.S.C. §103(a) over Kim in view of Wooten.

For at least the reasons described above, each of the cited references fails to teach or suggest repeating, by a host controller, a first transaction at a second time between the *same* host

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controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application. The embodiments of claims 5-21 and 36-41 include the aforementioned limitations not found in the cited references, and therefore are allowable.

D. Claims 23-25 and 43 are not rendered obvious under 35 U.S.C. §103(a) over Kim in view of Bayramoglu.

For at least the reasons described above, each of the cited references fails to teach or suggest repeating, by a host controller, a first transaction at a second time between the *same* host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application. The embodiments of claims 23-25 and 43 include the aforementioned limitations not found in the cited references, and therefore are allowable.

E. Claims 26-31 are not rendered obvious under 35 U.S.C. §103(a) over Kim in view of Bayramoglu, further in view of Wooten.

For at least the reasons described above, each of the cited references fails to teach or suggest repeating, by a host controller, a first transaction at a second time between the *same* host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application. The embodiments of claims 26-31 include the aforementioned limitations not found in the cited references, and therefore are allowable.

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F. Claims 2-10, 23-31 and 33-41 are not unpatentable for their dependence upon one of the rejected claims 42-44.

For at least the reasons described above, each of the cited references fails to teach or suggest repeating, by a host controller, a first transaction at a second time between the *same* host controller and the *same* hub that participated in the first transaction the first time, as described in embodiments of the present application. The embodiments of claims 2-10, 23-31 and 33-41 depend from allowable claims 42-44 and include the aforementioned limitations not found in the cited references; therefore they are allowable for similar reasons.

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CONCLUSION

For at least these reasons, the Claims 2-21, 23-31, and 33-44 are believed to be patentable over the cited references, individually and in combination. Withdrawal of the rejections is, therefore, respectfully requested.

Appellant therefore respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's decision rejecting claims 1-19 and direct the Examiner to pass the case to issue.

The Examiner is hereby authorized to charge any additional fees which may be necessary for consideration of this paper to Kenyon & Kenyon LLP Deposit Account No.

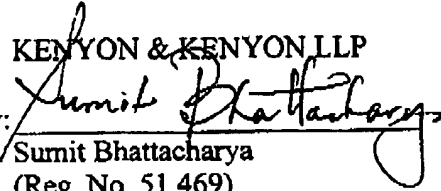
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Respectfully submitted,

KENYON & KENYON LLP

Date: December 26, 2006

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APPENDIX
(Brief of Appellants John I. Garney
U.S. Patent Application Serial No. 09/461,625)

8. CLAIMS ON APPEAL

1. (Cancelled)
2. The method of claim 42, wherein the first transaction at the first time and the first transaction at the second time are performed at a first communication speed or in accordance with a first protocol.
3. The method of claim 42, wherein the second transaction is performed at a second communication speed or in accordance with a second protocol.
4. The method of claim 42, further comprising performing a third transaction between the first transaction at the first time and the first transaction at the second time.
5. The method of claim 42, wherein performing the first transaction at the first time includes,

 sending from the host controller to the hub a first token packet including agent identification information and a transfer indicator indicating that data needs to be transferred between the host controller and the hub, and

 transferring a data packet between the host controller and the hub.

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6. The method of claim 5, wherein performing the first transaction at the first time includes the processing by the host controller at least one of an acknowledgment, a handshake indication, or a timeout indication.

7. The method of claim 5, wherein transferring the data packet between the host controller and the hub includes sending the data packet from the host controller to the hub.

8. The method of claim 42, wherein performing the first transaction at the second time includes,

sending from the host controller to the hub a first token packet including agent identification information and a transfer indicator indicating that data needs to be transferred between the host controller and the hub, and

transferring a data packet between the host controller and the hub.

9. The method of claim 8, wherein performing the first transaction at the second time includes processing by the host controller at least one of an acknowledgment, a handshake indication, or a timeout indication.

10. The method of claim 8, wherein transferring the data packet between the host controller and the hub includes sending the data packet from the hub to the host controller.

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11. A method for communicating data between a host and an agent, the method comprising:
receiving at a host controller from an agent a request to perform transactions periodically with a first period;

generating a frame template including a first transaction to be performed between the host controller and a hub; and

performing periodically the first transaction of the frame template with a second period that is less than or equal to half of the first period.

12. The method of claim 11 wherein the template period is greater than a duration of one frame.

13. The method of claim 11, wherein the template period is less than a duration of one frame.

14. The method of claim 11, further comprising performing periodically with the first period a second transaction between the hub and the agent.

15. The method of claim 14, wherein the periodically performed second transaction transfers information between the agent and the hub, and the periodically performed first transaction transfers the information between the host controller and the hub.

16. A method for communicating data between a host and an agent, the method comprising:
receiving at a host controller from an agent a request to perform transactions periodically with a first period;

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generating a first frame template and a second frame template each including a first transaction to be performed between the host controller and a hub;

performing periodically with the first period the first transaction from the first frame template; and

performing periodically with the first period the first transaction from the second frame template such that the first transaction from the first template and the first transaction from the second frame template are displaced in time by an interval.

17. The method of claim 16, wherein the first period is greater than or equal to a duration of one frame.

18. The method of claim 16, wherein the interval is less than a duration of one frame.

19. The method of claim 16, wherein the interval is greater than a duration of one frame.

20. The method of claim 16, further comprising:

performing periodically with the first period a second transaction between the hub and an agent;

wherein the periodically performed second transaction transfers data from the agent to the hub; and

wherein the periodically performed first transaction from the second template transfers the data from the hub to the host controller.

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21. The method of claim 16, wherein the periodically performed first transaction from the first template transfers data from the host controller to the hub, further comprising:

performing periodically with the first period a second transaction between the hub and an agent; and

wherein the periodically performed second transaction transfers the data from the hub to the agent.

22. (Cancelled)

23. The system of claim 43, wherein the first transaction at the first time and the first transaction at the second time may be performed at a first communication speed or in accordance with a first protocol.

24. The system of claim 43, wherein the second transaction may be performed at a second communication speed or in accordance with a second protocol.

25. The system of claim 43, wherein the host controller is adapted to perform a third transaction between the first transaction at the first time and the first transaction at the second time.

26. The system of claim 43, wherein the host controller is adapted to send, during the first transaction at the first time, a first packet including agent identification information and a transfer indicator indicating that data needs to be transferred between the host controller and the

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hub, and to transfer, during the first transaction at the first time, a data packet between the host controller and the hub.

27. The system of claim 26, wherein the host controller is adapted to process, during the first transaction at the first time, at least one of an acknowledgment, a handshake indication, or a timeout indication.

28. The system of claim 26, wherein the data packet may be transferred from the host controller to the hub.

29. The system of claim 43, wherein the host controller is adapted to send to the hub, during the first transaction at the second time, a first packet including agent identification information and a transfer indicator indicating that data needs to be transferred between the hub and host controller, and to transfer, during the first transaction at the second time, a data packet between the host controller and the hub.

30. The system of claim 29, wherein the host controller is adapted to process, during the first transaction at the second time, at least one of an acknowledgment, a handshake indication, or a timeout indication.

31. The system of claim 29, wherein the data packet may be transferred from the hub to the host controller.

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32. (Cancelled)

33. The system of claim 44, wherein the first transaction at the first time and the first transaction at the second time may be performed at a first communication speed or in accordance with a first protocol.

34. The system of claim 44, wherein the second transaction may be performed at a second communication speed or in accordance with a second protocol.

35. The system of claim 44, wherein the first hub controller is further adapted to perform a third transaction between the first transaction at the first time and the first transaction at the second time.

36. The system of claim 44, wherein the first hub controller is adapted to receive from the host controller a first packet including agent identification information, a transfer indicator indicating that data needs to be transferred between the host controller and the first hub controller, during the first transaction at the first time, and to transfer a data packet between the first hub controller and the host controller, during the first transaction at the first time.

37. The system of claim 36, wherein the first hub controller is adapted to send to the host controller at least one of an acknowledgment or a handshake indication during the first transaction at the first time.

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38. The system of claim 36, wherein the data packet may be transferred from the host controller to the first hub controller.

39. The system of claim 44, wherein the first hub controller is adapted to receive from the host controller a first packet including agent identification information and a transfer indicator indicating that data needs to be transferred between the first hub controller and the host controller, during the first transaction at the second time, and to transfer a data packet between the first hub controller and the host controller during the first transaction at the second time.

40. The system of claim 39, wherein the first hub controller is adapted to send to the host controller at least one of an acknowledgment or a handshake indication.

41. The system of claim 39, wherein the data packet may be transferred from the host controller to the first hub controller.

42. A method for communicating data between a host and an agent, the method comprising:
performing a first transaction at a first time between a host controller and a hub, said first transaction initiated by said host controller;
performing a second transaction between the hub and an agent based on the first transaction at the first time; and
repeating, by the host controller, the first transaction at a second time between the host controller and the hub.

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43. A digital system comprising:

a host controller;

a device driver adapted to operate the host controller to initiate and perform a first transaction at a first time between the host controller and a hub and to initiate and repeat the first transaction at a second time between the host controller and the hub;

wherein the hub is adapted to perform a second transaction with an agent based upon the first transaction at the first time; and

wherein the first transaction at the second time is repeated after the second transaction.

44. (Previously Presented) A digital system comprising:

a first hub controller adapted to initiate and perform a first transaction at a first time with a host controller and to initiate and perform the first transaction at a second time with the host controller;

a second hub controller coupled to the first hub controller and adapted to perform a second transaction with an agent based upon the first transaction at the first time; and

wherein the first transaction at the second time is performed after the second transaction.

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9. **EVIDENCE APPENDIX**

No further evidence has been submitted with this Appeal Brief.

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10. RELATED PROCEEDINGS APPENDIX

Per Section 2 above, there are no related proceedings to the present Appeal.